



MAYO CLINIC



CardinalHealth

Mayo Clinic/Cardinal Health GLN Implementation

WHITE PAPER

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Improving Patient Safety and Supply Chain Efficiency with GS1 Standards

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EXECUTIVE SUMMARY

Mayo Clinic and Cardinal Health have implemented standardized identifiers for accounts/locations, the GS1 Global Location Number (GLN), as the essential first step in their effort to fully support the adoption of healthcare supply chain standards. During the collaborative project, both parties discovered that the GLN could be implemented swiftly and easily - requiring only weeks, as opposed to months or years. This white paper outlines the GLN implementation process used by Mayo Clinic and Cardinal Health, and identifies the lessons learned and the results achieved so that others may learn how to implement the GLN in their operations and realize similar success.

INTRODUCTION

Poor data impacts many areas in the healthcare supply chain. Most importantly, poor data impacts patient safety when the supply chain fails to deliver the right medical product, to the right patient, at the right time. As a result, supply chain data standards are currently a major topic for the healthcare industry. In fact, standards adoption is now considered a requirement for effectively controlling both cost and quality in healthcare going forward.

In the past, there have been numerous discussions in healthcare with regard to the value of standards and which standards to use. Today, the discussion has shifted to how to implement standards, the first steps to take and timing. Industry groups like the Association for Healthcare Resource & Materials Management (AHRMM), Health Industry Group Purchasing Association (HIGPA), Healthcare Supply Chain Standards Coalition (HSCSC), and Strategic Marketplace Initiative (SMI), as well as various integrated delivery networks (IDNs), group purchasing organizations (GPOs), and suppliers, have all endorsed GS1 standards. In addition, many of the healthcare industry's supply chain partners, including Mayo Clinic, have voluntarily established the end of 2010 as the date by which they will adopt GS1 Global Location Numbers (GLNs) to replace custom account numbers in order to reduce costs and improve patient safety. This adoption target is known as the "2010 GLN Sunrise."

[See Appendix F for a link to a detailed description of the 2010 GLN Sunrise.](#)

Industry-wide implementation of data standards such as the GS1 System can improve supply chain data integrity. The GS1 System enables global and unique identification of products and locations, as well as the continuous, automatic update (i.e., synchronizing) of standardized product information across all supply chain partners. These standards provide the necessary foundation for achieving the best results when using complementary applications like automatic data capture, e-commerce, electronic record management, assets and equipment tracking, and traceability.

To illustrate this, Figure 1 below shows standardized product identifiers (GS1 Global Trade Item Numbers, or GTINs), standardized location identifiers (GLNs), and the Global Data Synchronization Network® (GDSN®) as the foundation of the “house” in building patient safety and an efficient supply chain. The pillars in the house represent the healthcare applications necessary to achieve patient safety and supply chain efficiency. The standards provide the interoperability required to support those applications and make all of it happen.

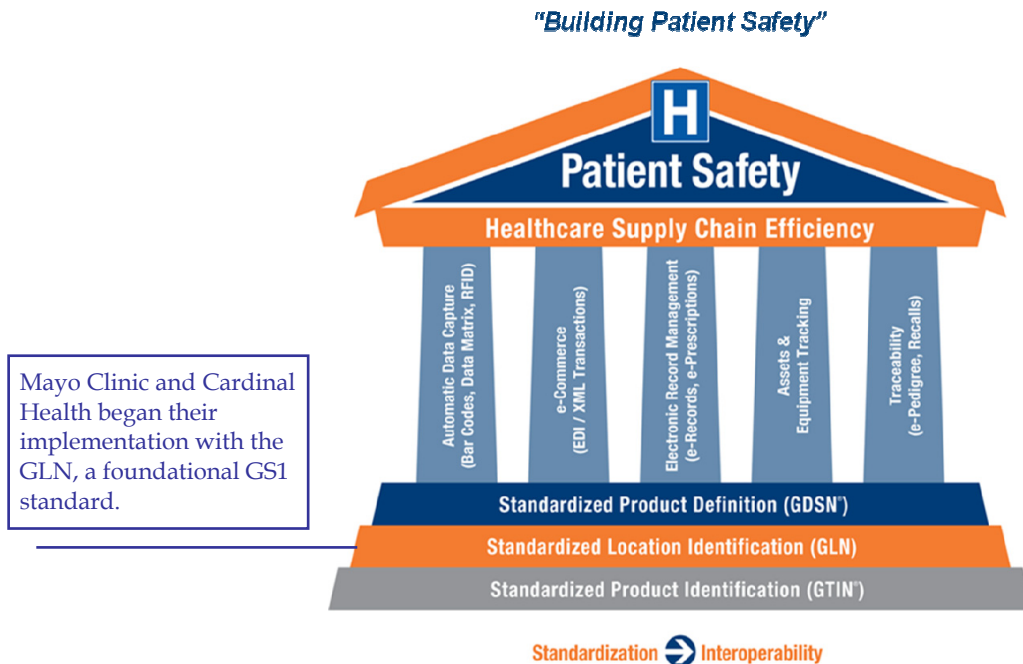


Figure 1. Building Patient Safety with GS1 Standards

Mayo Clinic firmly believes that supply chain data standards will greatly improve healthcare safety and efficiency, supporting their primary value that “the needs of patients come first.” In July 2008, Mayo Clinic and Cardinal Health collaborated to implement the GS1 GLN as their sole account/location identifier. Both organizations agreed that this GLN project would be an innovative first step toward the 2010 GLN Sunrise.

This white paper was developed to document the process used by Mayo Clinic and Cardinal Health to implement GLN in their organizations. It is intended to serve as a guide to help other providers and suppliers to rapidly implement and immediately realize the benefits that the GLN can bring to the healthcare industry. To that end, this paper explains the steps taken to implement this foundational GS1 standard, as well as the lessons learned and the results achieved at Mayo Clinic and Cardinal Health.

THE CHALLENGE

Prior to this project, Mayo Clinic's account and location numbers were not standardized across their supply chain partners. Instead, each Mayo Clinic location that was associated with a supplier had its own custom account number specific to that supplier. This required Mayo Clinic to manage the numerous individual account numbers assigned by their many vendors, which required significant resources and increased the likelihood for errors. As a result, this practice created an administrative burden and resulted in unnecessary expense.

Example of Account # Setup		
Vendor	Location	Account #
Vendor 1	Location 1	111111
Vendor 1	Location 2	111112
Vendor 1	Location 3	111113
Vendor 1	Location 4	111114
Vendor 2	Location 1	211111
Vendor 2	Location 2	211112
Vendor 2	Location 3	211113
Vendor 2	Location 4	211114

Figure 2. Multiple account numbers for the same locations

To illustrate this point, Figure 2 shows the Mayo Clinic account/location numbers used by various vendors. Mayo Clinic *Location 1*, for example, is identified as *Location# 111111* by *Vendor 1*, but as *Location# 211111* by *Vendor 2* - demonstrating how the same location can have numerous identification numbers. This approach fosters inaccuracy and inefficiency. Instead, each location should have one standard number (i.e., the GLN). Think of it as a mailing address: an identifier for a single location in the world that is globally unique to that location. No other organization, agency, or affiliate can use it to identify their locations, but all parties can and should use it to identify that location.

THE BUSINESS OPPORTUNITY

Each GLN identifier is a unique, 13-digit number for a specific location. Implementing GLN enabled Mayo Clinic to replace the numerous custom account numbers for each location with one unique number (GLN) for each location. This simplified the exchange of supply chain information and provided Mayo Clinic with the opportunity to manage orders, vendor payments and rebates more effectively.

INNOVATION IMPLEMENTATION

While implementation is *not* a daunting task, it can seem like it at the start. Listed below are some of the resources available to help guide providers and suppliers through the process:

- (1) **GS1 US Minnesota Pilot Project (2006-2007):** This pilot was conducted to develop GLN healthcare processes, setup and coordination. The final pilot report documents the findings, suggestions and lessons learned. The findings from the Minnesota Pilot helped guide Mayo Clinic and Cardinal Health's GLN implementation. The final reports developed by the Minnesota pilot team should be reviewed prior to initiating a 2010 GLN Sunrise program.

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- (2) **GLN Healthcare Provider Tool Kit:** A how-to guide developed by the industry for implementing GLNs in a hospital.
 - (3) **GS1 Healthcare US Website:** Provides tools and resources to guide an organization through GLN implementation. Contact information for GS1 US staff experts is also provided.
 - (4) **Information documented within this white paper.**

See Appendix F for links to these resources.

GS1 Standards and Solutions Used

- GS1 Global Location Number (GLN)
- GS1 US GLN Registry for Healthcare®

Creating the GLN Hierarchy

Setting the scope of the effort required a focus on Mayo Clinic's internal processes. The hierarchy of an organization's locations can vary considerably, even with the same number of beds and the same mission in the same city. Business considerations of the parent organization and the business model [i.e., just-in-time (JIT) or central delivery] can affect the number of GLNs required for an individual organization. The GLN hierarchy that Mayo Clinic defined is shown below:

Level 1 - Enterprise (corporate legal entity):

- Top Level of the Organization

Level 2 - Entity:

- Logical Grouping of Locations for Contracting, Pricing and Spend Aggregation
- Usually Geographically Designated

Level 3 - Location:

- Primarily the Receiving Location
- Mostly "Ship-to" Locations

Level 4 - Location:

- Primarily Reserved for Future Coding of the Deliver Location
- Also Used for Special Handling (within a Receiving Location)

Mayo Clinic, like other providers, was initially assigned GLNs in the GLN Registry for Healthcare® by their GPO (in this case, Novation). Once registered, no other GS1-compliant

organization will have the same GLNs. After the GLNs were assigned to Mayo Clinic, Mayo Clinic assumed ownership of their GLNs and hierarchy from their GPO in order to have hands-on management control of GLN alignment within their day-to-day operations and business strategy. A portion of the Mayo Clinic's hierarchy as listed in the GLN Registry is shown in Figure 3.

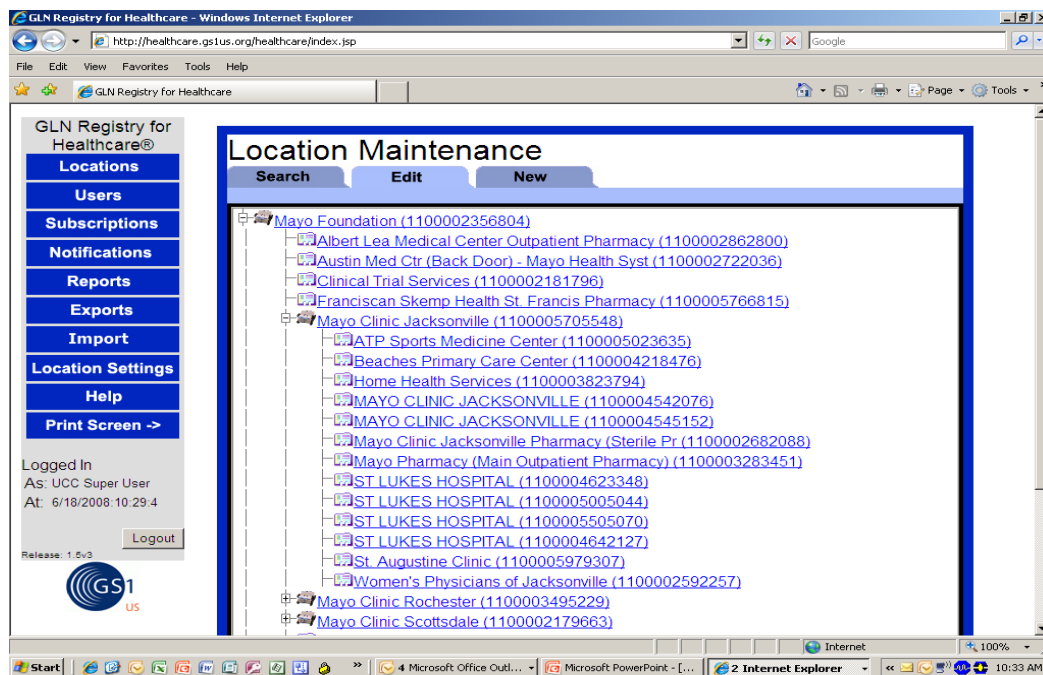


Figure 3. Mayo Clinic hierarchy as shown in the GLN Registry

Supply Chain Partners Selected

To limit project scope, Mayo Clinic worked with one distributor: Cardinal Health. Their electronic business-to-business exchange partner, GHX, was not expected to be an active participant in the project team since no change in system or processes was anticipated with GHX.

Planning Innovation, Building Consensus

While use of GLNs in retail and the grocery industry is robust, the use of GLNs in healthcare is just beginning. In initial meetings, Mayo Clinic and Cardinal Health learned that they had similar GLN adoption aspirations: they both wanted to be early adopters of standards. Mayo Clinic was the first hospital to approach Cardinal Health about transacting supply orders using GLNs.

Mayo Clinic and Cardinal Health held joint meetings to determine the scope of and the expectations for the project to transact with GLNs. After examination of their business

processes, they both agreed that GLNs would work well. Once this step was completed, both parties made a commitment to move forward.

Mayo Clinic and Cardinal Health realized that using GLN as a standard location identifier was something that would benefit each organization, as well as the healthcare industry. Each organization had the designated resources, capacity, and business logic to make the GLN work, and both recognized that in order for the project to succeed, they would need to work collaboratively. It was decided that each group would create their own internal project plans which would be combined later. At this point, it was time to identify team members and delegate responsibilities.

GLN Project Team

The GLN team included members from both Mayo Clinic and Cardinal Health. The selected team members were accountable to the *Project Sponsors* from each respective partner. A *Project Lead* was required from each organization to manage the project plans and oversee the team activities. Similarly, each partner required *Implementation Analysts* to understand the requirements and to configure the systems and processes. A *Functional Lead* and an *eBusiness Lead* were required at Cardinal Health to ensure changes to systems and processes did not inhibit current operations. A Mayo Clinic *Technical Specialist* and Cardinal Health *EDI Mapping Specialist* were also required to implement changes to the EDI code. The makeup of the teams is shown below.

Team Member	Company	Role
Bill Zimmerman	Cardinal Health	Sponsor
Joe Dudas	Mayo Clinic	Sponsor
Tom Krueger	Cardinal Health	Project Lead
Rita Sinclair	Cardinal Health	eBusiness Lead
Jill Fliehman	Cardinal Health	Functional Lead
Debbie Petersen	Cardinal Health	Implementation Analyst
Bryan Allen	Cardinal Health	Implementation Analyst
Theresa Franckowiak	Cardinal Health	EDI Mapping
Ken Pelletier	Mayo Clinic	Project Lead
Russ Mullins	Mayo Clinic	Implementation Analyst
Ross Hamernik	Mayo Clinic	IT Technical Specialist

In addition to daily communication through email and phone conversations, the team met weekly to discuss issues, questions and items completed. It was essential that both partners maintained total transparency regarding the project status.

PROJECT PLAN STEP-BY-STEP

The project was broken up into several phases:

- Phase 1: Pre-Implementation (Planning and Mapping)
- Phase 2: Cardinal Health Base System (Standard Order Processing)
- Phase 3: Cardinal Health JIT System (Value Added Processing)
- Phase 4: New ERP Locations (*because Mayo Clinic had an Enterprise Resource Planning (ERP) implementation project running simultaneously*)
- Phase 5: Wrap-Up (Resolve Lower Priority Issues)

Phase 1: Pre-Implementation

The Pre-Implementation Phase of the project was straightforward and sequential:

- (1) Mayo Clinic created a cross-reference worksheet to map the Cardinal Health account numbers to GLNs.
- (2) Cardinal Health reviewed the mapping for account accuracy.
- (3) Mayo Clinic sent a request to GHX with the specific GLN *Ship-to* locations that needed to be added to the GHX system (known as a “boarding request”).
- (4) GHX sent the boarding request to Cardinal Health to update their system with the new GLN numbers as well.
- (5) Cardinal Health set up their system to transact with both the GLN and original account number, enabling each company to test GLNs while still transacting with current account numbers.

See Appendix B for the detailed project plan.

Phases 2 through 5

During each subsequent phase of the project, Mayo Clinic first transacted in a test/development environment, and then repeated the test in the production environment. The steps performed in each of those environments are detailed below.

Test Environment Steps:

- (1) The test system was used to create test EDI 850 Purchase Orders using the GLN *Ship-to* locations. Mayo Clinic processed these orders and passed the transactions to GHX.

-
- (2) GHX processed the 850 Purchase Order transactions and forwarded it to Cardinal Health.
 - (3) Cardinal Health processed these orders and created the 855 Purchase Order Acknowledgment, 856 Advance Shipping Notice and 810 Invoice transactions - all of which were then passed to GHX.
 - (4) GHX processed the 855, 856 and 810 transactions, and then passed them to Mayo Clinic.*
 - (5) Throughout the entire testing process, the joint GLN team monitored every step. Once each side was comfortable with the test results, the process moved to production.

* NOTE: While Mayo Clinic did not use the GLN on any Mayo Clinic inbound transactions (i.e., 855 Purchase Order Acknowledgments, 810 EDI Invoices, and 856 Ship Notices), the team felt it important to test inbound transactions for future use.

Production Environment Steps:

- (1) Initially, test 850 Purchase Orders were sent to Cardinal Health from Mayo Clinic.
- (2) For three days, each order was monitored for errors and corrections.
- (3) Once the GLN team was comfortable with the standards-based solution, all Mayo Clinic-to-Cardinal Health orders were transacted using only GLNs.

It is important to note that Cardinal Health Base and Cardinal Health JIT systems were done sequentially.

Organizational Readiness

Internal training is necessary for buyers and customer support to have a successful implementation. It is necessary for end users to understand the changes so that they are able to transact via phone and fax if needed. Training was conducted with the Mayo Clinic procurement staff and a Cardinal Health sales representative.

See Appendix C for a copy of this training presentation.

PROJECT COSTS

Resourcing was the only significant cost for the project. It was estimated that less than 2.5 Full Time Equivalents (FTEs) would be required for over a period of six months. During execution of the project, actual FTEs needed were even less than estimated. No incremental budget requests were made to staff the project or to make the minor system changes needed. Figure 4 shows the resource allocation breakdown for the six month period.

Company	Roles	FTE
Cardinal Health	Project Sponsor	0.1
	Project Lead	0.25
	Functional Lead	0.25
	Implementation Analyst(s)	0.5
	EDI Mapping	0.1
<i>Cardinal Health Total</i>		<i>1.2</i>
Mayo Clinic	Project Sponsor	0.1
	Project Lead	0.5
	Implementation Analyst	0.25
	Programmer	0.25
<i>Mayo Clinic Total</i>		<i>1.1</i>

Figure 4. Resource allocation breakdown

IMPLEMENTATION RESULTS

- Mayo Clinic converted 35 custom account numbers to GLNs.
- Mayo Clinic was able to convert approximately 50,000 order lines to the GLN in February 2009 – which accounted for 85% of total EDI for February 2009 orders.
- \$8M dollars of product was transacted with Cardinal Health using the GLN in February 2009, and it is anticipated that over \$100M of product will be purchased with the GLN over the course of the 2009 year as a result of this implementation.

IMPLEMENTATION BENEFITS

Price accuracy improves with location identification accuracy. Location identification errors can cause loss of discount eligibility as well as tier qualification and rebate disputes.

- Mayo Clinic / Cardinal Health price accuracy is currently 99.5%. All other suppliers average 95% accuracy. Superior price accuracy is attributed to not only GLN, but also to the commitment that both organizations make to price integrity and associated improvement efforts.

LESSONS LEARNED

During the project, the GLN team worked through several challenges:

Location Reconciliation

Mayo Clinic had a warehouse with several receiving locations because certain inventory could not be mixed (e.g., flammables and non-flammables). Routing to distinct warehouse locations and distinct shipping labels were required. While originally there was only one GLN assigned to that warehouse, Mayo Clinic had to go back and create four new Level 4 GLNs for the four distinct locations within that warehouse.

NOTE: These are the only Level 4 locations currently configured for Mayo Clinic. In the future, Mayo Clinic may choose to standardize deliver locations and utilize reserved Level 4 for this purpose.

EDI Transactions

The EDI 850, 810, 855, and 856 transaction set needed to use a specific qualifier code for GLN in its mapping process. Specifically, the outbound mapping N1 segment (*Ship-to* information) needed to be changed from **91** to **UL**. (**UL** is the ANSI standard for a GLN when used as a *Ship-to*.) Otherwise, the updates needed were typical of EDI implementations.

See Appendix D for Mayo Clinic's 850 Purchase Order Map.

Cardinal Health System

The Cardinal Health Base system had the functionality for a generic location identifier. However, the JIT system had to be modified to accept a 13-digit GLN.

Mayo Clinic Database

Mayo Clinic's custom account database could only hold 12 characters. The global standard for GLN is 13 digits. Mayo Clinic had to change this field length to accommodate 13 digits.

NEXT STEPS

Mayo Clinic has stated that the GLN will be required by all suppliers by the end of 2010. Mayo Clinic's sourcing plan includes transacting with its healthcare suppliers using GLN location identifiers exclusively.

See Appendix E for Mayo Clinic's Announcement to Suppliers.

CONCLUSION

Mayo Clinic and Cardinal Health are among the first organizations in healthcare to implement GLNs in supply chain transactions. The use of GLNs improves supply chain management performance, and GLNs used in conjunction with other GS1 standards promise even greater performance. Similarly, the more supply chain partners that adopt GS1 standards, the greater the benefits for the entire industry.

A strong project plan with a dedicated team made this implementation successful. It is necessary to educate the team, and get their feedback and agreement for the tasks that need to get done. It is also necessary to conduct joint team meetings where all team members attend and communicate with everyone within the project. And finally, everything should be tested.

With the 2010 GLN Sunrise date quickly approaching, it is highly recommended that healthcare supply chain partners use the resources within this white paper and those available from GS1 Healthcare US to begin implementing GLNs. It is the opinion of the author that the GLN was easy to implement and that there is an abundance of willing partners. In conclusion, the GLN implementation was straightforward, technologically feasible, and seamless for operations to implement.

ABOUT MAYO CLINIC

“Mayo Clinic is a not-for-profit medical practice dedicated to the diagnosis and treatment of virtually every type of complex illness. The needs of the patient come first. [A patient] will see as many doctors, specialists and other health care professionals as needed to provide comprehensive diagnosis, understandable answers and effective treatment.”

ABOUT CARDINAL HEALTH

“Headquartered in Dublin, Ohio, Cardinal Health, Inc. (NYSE: CAH) is a \$91 billion, global company serving the health care industry with products and services that help hospitals, physician offices and pharmacies reduce costs, improve safety, productivity and profitability, and deliver better care to patients. With a focus on making supply chains more efficient, reducing hospital-acquired infections and breaking the cycle of harmful medication errors, Cardinal Health develops market-leading technologies, including Alaris® IV pumps, Pyxis® automated dispensing and patient identification systems, MedMined™ electronic infection surveillance service and VIASYS® respiratory care products. The company also manufactures medical and surgical products and is one of the largest distributors of pharmaceuticals and medical supplies worldwide. Ranked No. 18 on the Fortune 500, Cardinal Health employs more than 40,000 people on five continents. More information about the company may be found at www.cardinalhealth.com.”

APPENDIX A: GLOSSARY OF TERMS

Boarding Request: The process of adding locations with GHX.

Electronic Data Interchange (EDI): The computer-to-computer exchange of structured information, by agreed message standards, from one computer application to another by electronic means and with a minimum of human intervention. This includes business transactions, such as orders, confirmations and invoices, between organizations.

Global Data Synchronization Network® (GDSN®): The GS1 Global Registry and a network of interoperable, certified Data Pools that enable data synchronization per GS1 System standards.

Global Healthcare Exchange (GHX): A third party provider that automates a hospital's procurement to payment cycles via EDI.

Global Location Number (GLN): The globally unique GS1 identification number for legal entities, functional entities and physical locations. The Global Location Number is 13 digits, comprised of a GS1 Company Prefix, a Location Reference and a Check Digit. The associated name, address, and class of trade are "tied" to each unique number, and each GLN is specific to only one exact and very precise location within the world.

GLN Healthcare Provider Tool Kit: The Global Location Number (GLN) Healthcare Provider Tool Kit is a how-to guide for implementing GLNs for standardized party and location identification in hospitals. This guide is available free online from GS1 Healthcare US at www.gs1us.org/hcptoolkit.

GLN Registry for Healthcare®: A comprehensive and accurate registry of healthcare facilities and suppliers in the United States, with corresponding GLNs. The Registry keeps track of name, address, class of trade, and organizational hierarchy information.

GS1®: GS1 is a leading global organization dedicated to the design and implementation of standards and solutions to improve the efficiency and visibility of supply and demand chains, both globally and across sectors. GS1 is a fully integrated global organization, with 108 Member Organizations (like GS1 US™) serving over a million companies doing business across 150 countries. Together, GS1 and its subsidiaries and partnerships connect companies with standards-based solutions that are open, consensus-based and universally endorsed.

GS1 Healthcare US™: GS1 Healthcare US is an industry group that focuses on driving the adoption and implementation of GS1 standards in the healthcare industry in the United States to improve patient safety and supply chain efficiency. GS1 Healthcare US brings together members from all segments of the healthcare industry to address the supply chain issues that most impact healthcare in the United States. Facilitated by GS1 US, GS1 Healthcare US is one of more than a dozen local GS1 Healthcare user groups around the world that supports the adoption and implementation of global standards developed by GS1.

GS1 System: The specifications, standards, and guidelines administered by GS1. Through the Global Standards Management Process (GSMP), GS1 manages the GS1 System to maintain the most implemented standards in the world.

GS1 US™: GS1 US is the Member Organization of GS1 that serves companies in the United States. As such, it is the national implementation organization of the GS1 System dedicated to the adoption and implementation of standards-based, global supply chain solutions in the United States. GS1 US currently serves over 200,000 U.S. member companies -- 18,000 of which are in healthcare.

Global Trade Item Number® (GTIN®): Globally unique GS1 identification number used to identify trade items, which includes both products and services that are sold, delivered, and invoiced at any point in the supply chain.

Just-In-Time (JIT): Stock-control system in which goods are produced and delivered as they are required. It is designed to eliminate waste and avoid the need for large inventories.

APPENDIX B: MAYO CLINIC / CARDINAL HEALTH GLN PROJECT PLAN

ST EP	Process
	Pre Implementation 850/855/810
1	Mayo Clinic identifies the applicable GLN values and passes crosswalk table to vendor cross referencing GLN to 'ship to' account.
2	Vendor reviews data and ask questions.
3	Request is sent to GHX for the account addition to be boarded on their servers via SuperSAW document.
4	GHX loads value on their servers and verifies with vendors.
5	Vendor reviews data and ask questions.
6	Vendor modifies ANSI Code to accept ANSI standard associated with GLN values.
7	SCI E-Commerce Support communicates GLN add to vendor EDI contact. Vendor EDI contact is responsible for verification that new value is loaded in their system(s).
8	Once GLN add is verified by GHX and affected vendor, value is added to the YM05 in SYSINT2 for testing purposes.
9	Mayo Clinic creates test orders in Lawson and transmits them via EDI through GHX.
10	Vendor processes test orders and the 855 is passed back to GHX.
11	855 loaded in GHX.
12	855 is passed to Mayo Clinic into SYSINT2.
13	PO122 is generated from the 855 to verify order processed correctly.
14	Mayo Clinic communicates the testing and the plan to move forward.
	MCR/LA/MCF/MCA/EU Go Live Production
15	Mayo Clinic updates YM05 with GLN values in production.
16	Mayo Clinic verifies that vendor location is setup for EDI issue method in production in the PO10.2.
17	Mayo Clinic notifies buyers, GHX, and EDI coordinators about that we are going live.
18	Mayo Clinic creates orders in Lawson and transmits them via EDI through GHX.
19	Vendor processes orders and the 855 is passed back to GHX.
20	855 loaded in GHX.
21	855 is passed to Mayo Clinic into production via the EDI Inbound process.
22	PO122 is generated from the 855 to verify order processed correctly.
23	Mayo Clinic monitors orders for 3 business days via Lawson, GHX, and vendor website if available and communicates to Mayo and
24	Mayo Clinic 810 are passed by vendor and are monitored in GHX MyExchange web portal and Lawson.
25	Mayo Clinic communicates with buyers and vendors that implementation has been completed.

*NOTE: MCR stands for Mayo Clinic Rochester. LA stands for Latin America. MCF stands for Mayo Clinic Florida. MCA stands for Mayo Clinic Arizona. EU stands for European Union. YM05 is the transaction mechanism to launch EDI orders. SYSINT2 is Mayo Clinic's Test System.

APPENDIX C: ORGANIZATIONAL TRAINING PRESENTATION

GLN



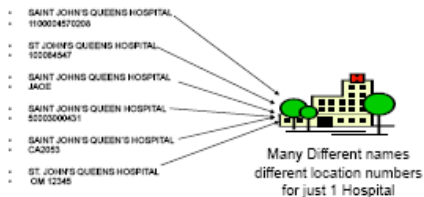
GLOBAL LOCATION NUMBER

GLN

- What is a Global Location Number (GLN)?
 - A globally unique 13-digit identification number used for legal entities, functional entities, and physical locations.

Healthcare Issues

Too many (identifiers / rosters) for same location
Results Confusion, lost shipment and inefficiency



Healthcare with GLN Registry for Healthcare®



GLN where is it stored in Lawson

• IC02 Location

Company: 100 MAYO MED EDU AND RESEARCH
Location: (APVC) MAYO CLINIC CAMPUS - MCI

Miscellaneous

Default PO Process Level: []
Default PO Code: []
Health Industry Number: []
Global Location Number: 1100004570208
Sell Tax Code: []
Purchasing Tax Code: []

Roles

Vendor: []
Purchase From: []
Customer: []
Ship To: []
Replenishment Requester: []

PROVIDER

- STANDARD SHIP TO IDENTIFICATION
 - ONE LOCATION EQUALS MANY
 - ACCOUNT NUMBERS
 - SITE DESCRIPTIONS
 - ATTRIBUTES
 - DATA INTEGRITY TEAMS
 - 12,000 VENDORS = 3,500 ACCOUNT #'S
 - GLN IMPLEMENTATION = 200 ACCOUNT #'S

Examples

Below are 7 different account numbers for product delivery to the shipping address for JAMCJ. We can go to one number – GLN -1100004542076

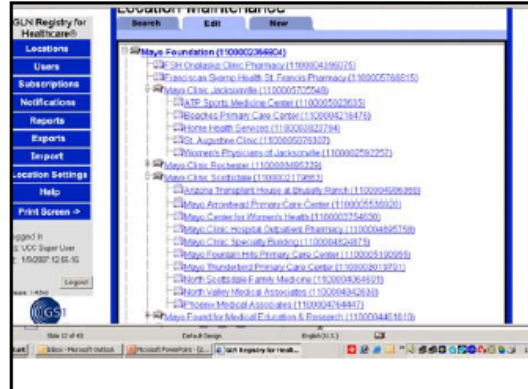
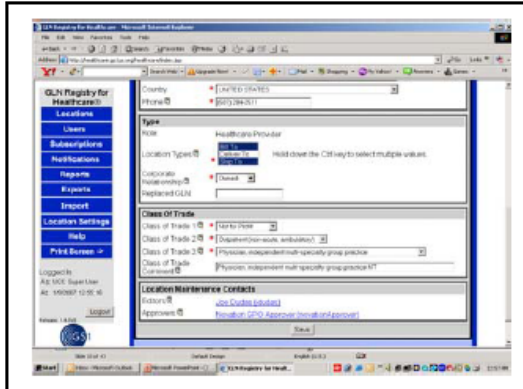
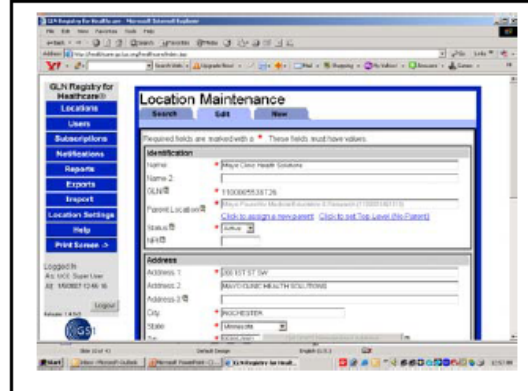
VTNR	VTNR NAME	LOCATION CODE	VAR ADDR1	VAR ADDR2
2304	ABBOTT LABS DIAGNOSTICS (MCJ)	JAMC	3000333 (MCJ)	1 ABBOTT PARK
2304	ABBOTT LABORATORIES INC	JAMC	2870 (MCJ)	8031 PINEHURST
2351	ALMED INC	JAMC	800807 (MCJ)	17145H ST
2600	BD BIOSOURCE CLONTECH	JAMC	ACCT #500720 (MCJ)	20 E MEADOW CIRCLE
2800	COCHLEAR	JAMC	02403 (MCJ)	1400 WEDGE DR E
2801	JOHNSON & JOHNSON	JAMC	83114 (MCJ)	10 BOX 880
3308	FISHER HEALTHCARE	JAMC	ACCT #53301001 (MCJ)	275 PACIFIC DR
7400	PARADELLA ENTERPRISES	JAMC	17070 (MCJ)	2001 POKESHOP ST

REBATE REPORTING ANALYSIS

- INCONSISTENT REBATE REPORTING
 - NOT ALL SPEND CAPTURED
 - INCONSISTENCES IN ENTITY REPORTING
 - DATA VERIFICATION MAY BE NON EXISTENT
- GLN IMPLEMENTATION REPORTS ACCURATE DATA

GLN Registry for Healthcare®

- What is the GLN Registry?
 - A centralized database that keeps track of the name, address, class of trade, and organizational hierarchy information about each provider.
 - Available 24 hours a day, 7 days a week.
 - Stores all present and past GLN information.



Cardinal/ Mayo GLN Project

- Cardinal is an early adopter of GLN. A cross functional team has been put together to implement this methodology.
- Mayo
 - Kenneth Pelletier
 - Russ Mullins
 - Ross Hamernik
- Cardinal
 - Guy Gallagher
 - Tom Krueger
 - Allen Bryan

Milestones

- Phase 1 Cardinal Base
 - (8/14/2008)
- Phase 2 Cardinal Valuelink
 - (10/2/2008)
- Phase 3 Eau Claire
 - TBD

Data Issues

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 - All issues will be documented and addressed by the GLN team
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COMPANY	OLD ACCT NUMBER	LOCATION	PURCHESLOC	GL N. BRN	
1007000001	ROCAT	ROSN		716666070056	Select Marys Hospital Receiving
1007000106	ROHNN	LAR		716666070058	Flomberg Receiving Desk
1007000012	ROFAC	ROSN		716666040109	Fairfax Warehouse
1007000041	JPCCL	JAN		716666070044	BRVO CLINIC JACKSONVILLE
100070000106	ARC3	LAR1		716666040044	ARCADA CS INVENTORY
100070000101	DFCS	LAR1		716666070125	SPANITA CS INVENTORY
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|--------------|-----------------|----------|------------|--------------|---------------------------------|
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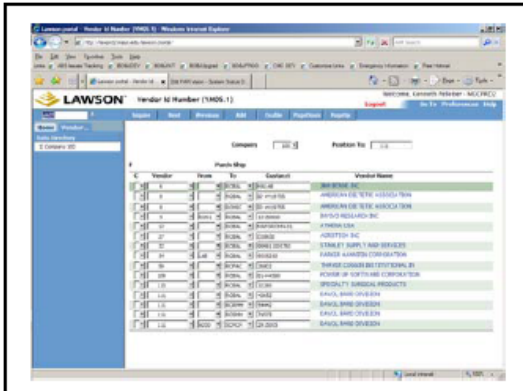
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APPENDIX D: MAYO CLINIC 850 PURCHASE ORDER MAP

MAYO FOUNDATION 850 PURCHASE ORDER TRANSACTION SET (version 4010) OUTBOUND						850 Purchase Order		
Area	Segment/ Element	M=Mandatory O=Optional C=Conditional	Min/ Max	Element Nbr	Element Type	Element Description	Mayo Use	Lawson Field Mercator Mapped
H E A D E R	ST	Mandatory				Transaction Set Header		
	ST/01	M	3/3	143	ID	Transaction set I.D.	"850"=Purchase Order	
	ST/02	M	4/9	320	AN	Transaction control number	Matches the 'SE' segment	
	BEG	Mandatory				Beginning Segment for PO		
	BEG/01	M	2/2	353	ID	Purpose	"00"=A new purchase order	
	BEG/02	M	2/2	92	ID	P.O. Type Code	"SA"=Stand-alone	
	BEG/03	M	1/22	324	AN	P.O. Number	P. O. Number (14 characters)	PCR-PO-NUMBER
	BEG/04	O	1/30	328	AN	Release Number	Not Used	
	BEG/05	M	8/8	323	DT	P.O. Date	Date of P.O. - CCYYMMDD	PCR-PO-DATE
	REF	Optional				Reference Identification		
	REF/01	M	2/3	128	ID	Reference ID Qualifier	"ZY" = Referenced Pattern ID	
	REF/02	C	1/30	127	AN	Reference ID	Requisition Number	PLS-SOURCE-DOC-N or PLS-SOURCE-DOC-A
	PER	Optional				Admin Communications Contact		
	PER/01	M	2/2	366	ID	Contact Function Code	"BD"=buyer/dept	
	PER/02	O	1/35	93	AN	Name	Buyer Name (25)	BUY-NAME
	PER/03	C	2/2	365	ID	Communications ID	"TE"=telephone	
	PER/04	C	7/25	364	AN	Communications Number	Telephone Number (12)	BUY-PHONE
	TAX	Optional				Tax Reference		
	TAX/01	M	1/20	325	AN	Tax Identifier Number	Tax Identifier Number	
	TAX/12	M	1/1	441	ID	Tax Exempt Code	Tax Exempt Code	
	DTM	Optional				Date Information		
	DTM/01	M	3/3	374	ID	Date/Time Qualifier	"010"	
	DTM/02	C	8/8	373	DT	Delivery Requested Date	CCYYMMDD	PLI-EARLY-DL-DATE
	DTM/03	C	4/8	337	TM	Time	Time of Transaction	
	N9	Optional						
	N9/01	M	2/3	128	AN	Reference Identification	"YD"	
	N9/02	C	1/30	127	AN	Reference Identification	"409413"	
	MSG	Optional				Header Comments		
	MSG/01	M	1/264	933	AN	Free-form Message Text	Header Comments	
D E T A I L	N1	Mandatory				Ship To		
	N1/01	M	2/2	98	ID	Ship to ID	"ST"=Ship to	
	N1/02	O	1/35	93	AN	Ship to name	Name	PCR-SH-NAME
	N1/03	C	1/2	66	ID	ID code qualifier	"UL" if GLN is used in N1/04 below. Otherwise "91"	
	N1/04	C	2/17	67	AN	ID Code	(Preferably) Mayo's GLN for the ship- to location otherwise vendor's acct # for Mayo ship-to location	
	TD5	Optional				Carrier Details(Routing Sequence/Transit Time)		Added 3/17/05
	TD5/05	O	1/35	387	AN	Routing	Rush Order Instructions-Prints if ON present in TD5/12	Added 3/17/05
	TD5/12	O	2/2	284	ID	Service Level Code	Only prints TD5 Segment if ON is present on Order	Added 3/17/05
	PO1	Mandatory				PO Baseline Item Data		
	PO1/01	M	1/6	350	AN	PO line number	Mayo's PO line item number	PCR-PO-NUMBER
	PO1/02	M	1/4	330	N	Quantity Ordered	Whole Numbers Only	PLI-QUANTITY
	PO1/03	M	2/2	355	AN	Unit of measure code	Unit of measure	PLI-ENT-BUY-UCOM
	PO1/04	M	1/10	212	R	Unit Price	2 decimal places-explicit	PLI-ENT-UNIT-CST
	PO1/05	N	2/2	639	ID	Basis unit price code	Not used	
	PO1/06	M	2/2	235	ID	Product ID qualifier	"VC"=Vendor catalog number	
T O T A L	PO1/07	M	1/30	234	AN	Product ID	Vendor catalog number	MRL-VEN-ITEM
	PO1/08	M	2/2	235	ID	Product ID qualifier	"IN"=Mayo's internal number	
	PO1/09	M	1/30	234	AN	Product ID	Mayo's internal catalog number	
	PO1/10	O	2/2	235	ID	Product ID qualifier	"MF"=Mfg Nbr	
	PO1/11	O	1/30	234	AN	Product ID	Manufacturer's Number	PLI-MANUF-NBR
	PO1/12	O	2/2	235	ID	Product ID qualifier	Not Used	
	PO1/13	O	1/30	234	AN	Product ID	Not Used	
	PO1/14	O	2/2	235	ID	Product ID qualifier	"CR"=Contract Number	
	PO1/15	O	14	234	AN	Product ID	Contract Number	PLI-AGREEMENT-REF
	PID	Optional				Item Description		
	PID/01	M	1/1	349	ID	Type	"F"	
	PID/05	C	1/80	352	AN	Product Description	(PID fields 2-4 not used)	PLI-DESCRIPTION
	MSG	Optional				Line Comments		
	MSG/01	M	1/264	933	AN	Free-form Message Text	Line Comments	
	N1	Optional				Name - Deliver To		
S E T T R A I L	N1/01	M	2/2	98	ID	Deliver To ID	"MA"	
	N1/02	C	1/35	93	AN	Ultimate Location	Bldg,Room,Name,etc.	
	REF	Optional						
	REF/01	M	2/2	128	ID	Req ID	"RQ"	
	REF/02	C	1/30	127	AN	Req Number		PLS-SOURCE-DOC-N or PLS-SOURCE-DOC-A
	CTT	Mandatory				Transaction Totals		
	CTT/01	M	1/16	354	N	Number of line items	Total number of PO1 segments	
A L	CTT/02	M	1/10	347	N	Hash Totals	Total of PO1 quantities	
	SE	Mandatory				Transaction Set Trailer		
	SE/01	M	1/6	96	N	ST, SE, and segments between		
	SE/02	M	4/9	329	AN	Transaction Control Number	Matches 'ST' segment above	

APPENDIX E: MAYO CLINIC ANNOUNCEMENT TO SUPPLIERS

Date: December 15, 2008

To: Supplier Account Manager/Representatives

Re: Data Synchronization Requirements Update

Data synchronization between our Enterprise Resource Planning (ERP) and business partner systems is a business requirement that we have been working diligently to achieve. This objective is aligned formerly with the Health Care Supply Chain Standards Coalition (HSCSC) and currently GS1 Healthcare US as well as industry in general. Standards are critical to an effective and efficient supply chain for our community. Mayo Clinic has utilized a standard price agreement template to collect product information for system updates. We currently require the following standard elements:

- GLN – Global Location Number
- GTIN – Global Trade Identification Number
- UNSPSC – United Nations Products and Services Code

Moving forward we have also established two related and significant initiatives:

- Sunrise 2010 – Elimination of the Custom Account Number
- Sunrise 2012 – Elimination of the Custom Product Number

Much like our eCommerce initiatives of the past we ask that you make arrangements with us to migrate to these standards to ensure there are no future disruptions in our transactions.

Please contact our Supply Chain Management office 507-266-1366, if you have any questions.

Jim Francis, Supply Chain Management Chair

Mark Dozier, Sourcing and Contracting Director

Joe Dudas, Informatics Director

APPENDIX F: RESOURCE LINKS

- (1) Minnesota Pilot Phase 1 - *GLN Registry for Healthcare® Recommendations for Providers, Manufacturers and Distributors Based on Lessons learned from the Minnesota Pilot*:
http://healthcareportal.gs1us.org/DocumentLibrary/tabid/70/DMXModule/419/Command/Core_Download/Default.aspx?EntryId=30
- (2) Minnesota Pilot Phase 2 - *Process Map for Healthcare Using Global Location Numbers (GLNs) and the GLN Registry for Healthcare*:
http://www.gs1us.org/dnn_gs1us/GS1HealthcareUS/HealthcareDocumentLibrary/tabid/166/DMXModule/586/Command/Core_Download/Default.aspx?EntryId=163
- (3) GLN Healthcare Provider Tool Kit: www.gs1us.org/hcptoolkit
- (4) GS1 Healthcare US website: www.gs1us.org/healthcare
- (5) 2010 GLN Sunrise: www.gs1us.org/hcsunrise
- (6) Cardinal Health: *About Us*. 2009: <http://www.cardinal.com/us/en/aboutus/>
- (7) Mayo Clinic: *About Mayo Clinic*. 2009:
<http://www.mayoclinic.com/health/aboutthissite/aboutmayoclinic>